

# Solid Waste Management in SOUTH ASIA



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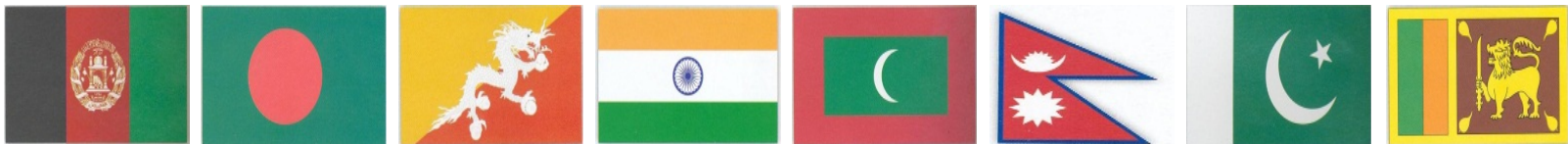
IPLA Global Forum 2012

# What is SACEP



- ❖ SACEP is an inter-governmental organization of 8 member states

Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka



- ❖ Established in 1982 it is mandated to promote and support protection, management and enhancement of the environment in South Asia

# What we do

The primary function of SACEP is to work with its eight member countries

- ❖ To promote cooperative activities in priority areas of environment of mutual concern;
- ❖ To ensure that these activities are beneficial individually and collectively to the member states of the region;
- ❖ To extend support as needed through exchange of knowledge and expertise available among the member countries;
- ❖ To provide local resources towards implementation of projects and activities; and
- ❖ To maximize the impact of support received from donor countries and other sources.





# Organization Structure of SACEP

## 1. The Governing Council (GC)

the principle review and deliberative body that is responsible for determining policy and programmes

## 2. The Consultative Committee (CC)

responsible for facilitating the implementation of policies strategies and programmes approved by the GC and provides guidance to the Secretariat in its activities

## 3. National Focal Points

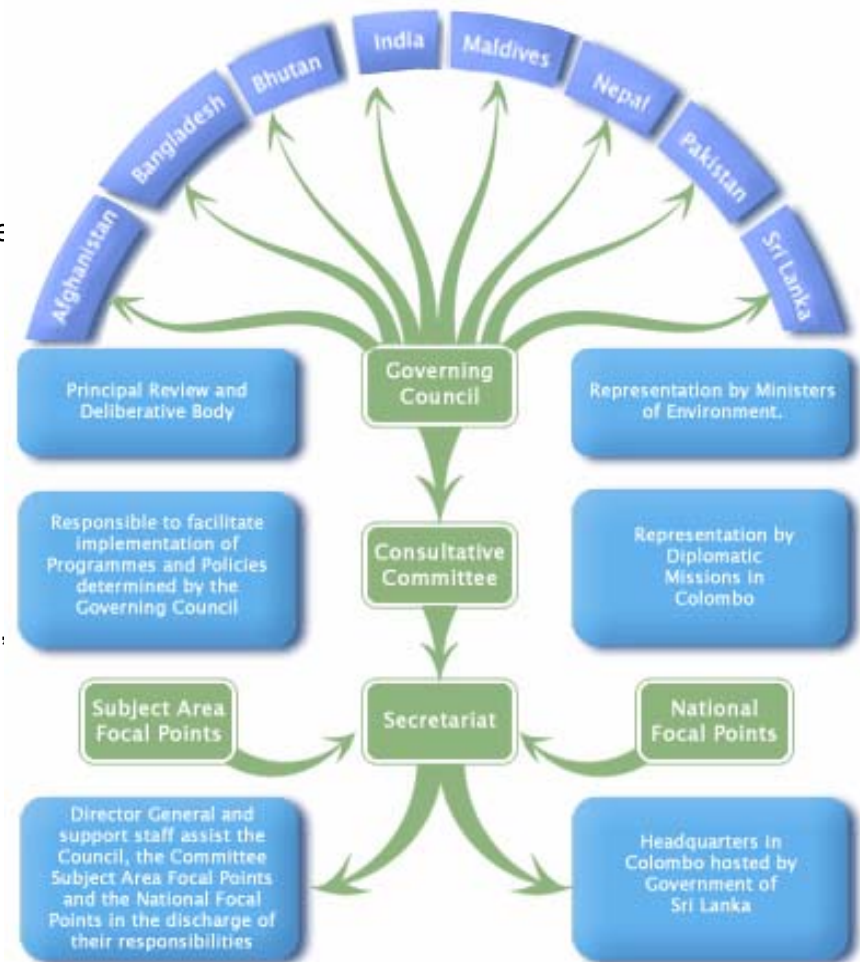
National Focal Points facilitate the work at country levels and function as the main communication link between the Secretariat and the respective country.

## 4. Subject Area Focal Points (SAFP)

Co-operate with the secretariat in project identification, formulation, implementation and monitoring.

## 5. The Secretariat

Consists of the Director General and professional, administrative and supporting staff. It is based in Colombo, Sri Lanka and is under the patronage of the Government of Sri Lanka.



# SACEP Partnership Programmes

- ❖ Malé Declaration on Control and Prevention of Air Pollution and its likely Trans-boundary Effects for South Asia – UNEP RRC.AP
- ❖ South Asian Seas Programme( SASP) –under the umbrella of UNEP Regional Seas Programme, It covers five maritime SACEP countries - Bangladesh, India, Maldives, Pakistan and Sri Lanka
- ❖ Capacity building for the Clearing-House Mechanism of the Convention on Biological Diversity in South Asia – CBD and Royal Belgian National Focal Point for the CHM
- ❖ Inception and Training Workshop on Establishment of Environmental Data and Information Management System for South Asia- UNEP-ROAP
- ❖ Partnership for Cleaner Fuels and Vehicles (PCFV) - UNEP
- ❖ Establishment of Basel Convention Regional Centre for South Asia
- ❖ Establishment of a South Asia Regional Initiative for the conservation and wise use of wetlands – Ramsar Convention Secretariat
- ❖ The South Asia Wildlife Enforcement Network (SAWEN) - initiated by SACEP to combat illegal trade of Wildlife in the Region -TRAFFIC International/ WWF
- ❖ Environmentally Sustainable Transport (EST) - UNCRD
- ❖ International Partnership for Expanding Waste Management Services of Local Authorities (IPLA) – UNCRD



# Current Priority Subject Areas of SACEP

The 10<sup>th</sup> Governing Council approved the following broad areas as priority subject areas

- Waste Management

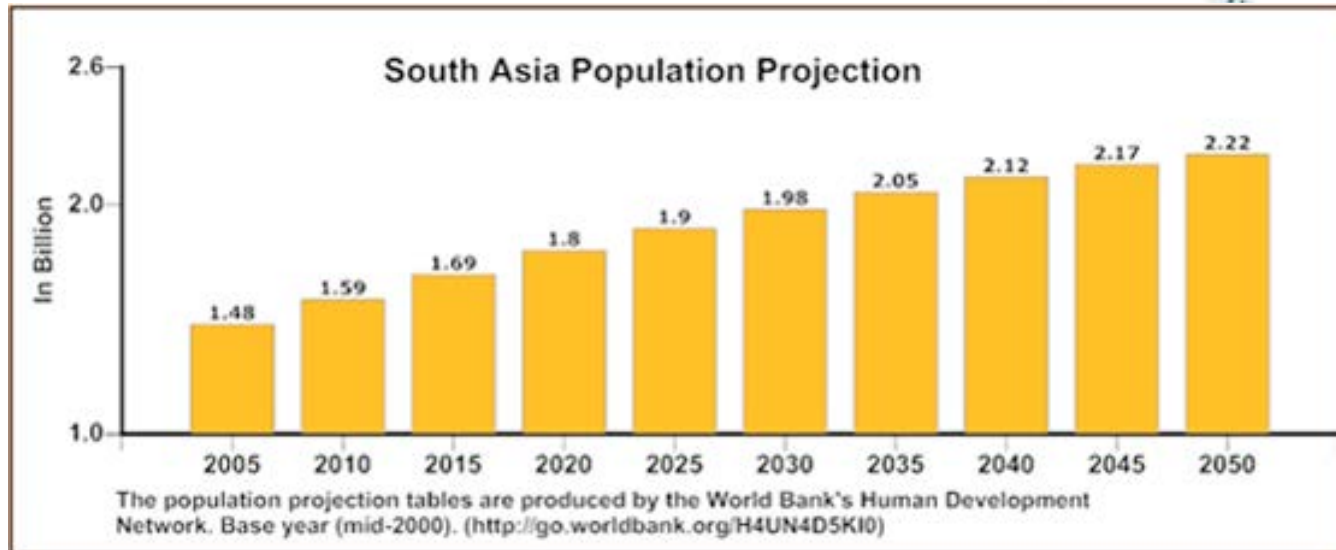
- Adaptation to Climate Change

- Data Information Management



# South Asia Region

- Spans in an area of about 4,771,220 sq km (world Bank)
- Population is about 1.4 Billion or 1/5<sup>th</sup> of the world population
- By 2050, South Asia's population is likely to exceed 2.2 billion





## IPLA members – South Asia



### SACEP – Sub Regional Secretariat for South Asia

- ◉ **Bangladesh** – Waste Concern, Sylhet City Corporation
- ◉ **Bhutan** – Thimphu District Municipality, Department of Urban Development & Engineering (Ministry of Works & Human Settlement)
- ◉ **India** – Development Alternatives, Environment Management Centre(EMC), National solid waste Association (NSWA), Centre for Development Communication, IL &FS Waste Management & Urban Services Ltd,
- ◉ **Nepal** – Kathmandu Metropolitan City Government, Nepalese Farming Institute , Nepalese Farming Institute
- ◉ **Pakistan** – City District Government Karachi, Muhammad Akram & Sons Trading & Investment
- ◉ **Sri Lanka** – Matale City, Central Environmental Authority, The Open University



# South Asian Scenario

## AFGHANISTAN

- Kabul is home to an estimated four million people.
- Produces nearly 1080 tons of solid waste daily
- Solid waste and rubbish is dumped in the **Chemtala plains**, about 7km north of Kabul.
- A new engineered landfill is expected to supersede the existing landfill in the future, this will be located about 5 km north from the Chamtala .



## BANGLADESH

- The urban areas generate approximately 15,000 tons of waste p/d, and over 5.84 million tons annually.
- Total generation of waste amount in Dhaka City is around 3,200 t/d
- Dhaka City Corporation collects about 44 % of total waste generated
- They partly adopt private firms for collection and transport of municipal waste



## BHUTAN

- Has 61 towns with a total population of 634,982, (The Urban population comprise of 31 %.)
- Thimphu city generates about 50 tones of waste each day
- 1993, a waste disposal site at Memelakha, was developed by the Thimphu City Corporation (TCC) with assistance from (DANIDA).
- They have “A Nation al Strategy on Integrated Solid Waste Management “ which was formulated in 2007

## INDIA

- Is the second most populated nation on the planet (17.66% of the world population lives there.)
- The six metro cities, Kolkata, Mumbai, Delhi, Chennai, Hyderabad and Bengaluru together generate 48,000 TPD an 17.5 million TPY
- In Delhi 8000 MT/day of estimated waste generated, however only about 300 MT/day of waste is processed for composting.
- Approximately 6000 MT per day of waste is transported to 3 landfill sites
  - Bhalswa 2,700 MT/day
  - Ghazipur 2,100 MT/day
  - Okhla 1,200 MT/d
- All the three sites have exhausted their life span





## MALDIVES

- Comprises of
  - 20 Atolls, 1190 Coral islands
  - Total Land Area = 300 km<sup>2</sup>
- The average rate of solid waste generation
  - Malé - 0.8-1 kg/person/day
  - in atolls - 0.3-0.5 kg/person/day,
  - Resort islands - 2.5kg/person/day
- Disposal sites are typically uncontrolled and unmanaged and located along vegetation lines or shorelines
- The GoM launched the “ National Solid Waste Management Policy” in 2008



## NEPAL

- 58 municipalities in Nepal generate about 1,369 tons of municipal waste per day .
- Total Generation of solid waste in Kathmandu is around 335 ton/day and per capita waste generation is around 0.3 kg/p/day
- Some new approaches tried out in
  - Door-to-door collection
  - User fees
  - Source-separated collection
  - Composting
  - Private sector participation



## PAKISTAN

- About 54,850 tons of solid waste is generated daily in urban areas and only 60% is collected by the municipal authorities
- The total waste generated in Islamabad is around 425 tons per day & per capita generation is 0.5901 kg per day
- About 12,772 kg of hazardous industrial and infectious hospital waste is generated in Islamabad and these wastes are being simply treated as ordinary waste
- Pakistan Environmental Protection Agency introduced "Guidelines for Solid Waste Management" in 2005

## SRI LANKA

- The total Municipal Solid Waste generated in the country is around 6,400 tons per day and the daily waste collection by Local Authorities is estimated at 2683 tons.
- Per capita per day waste generation on the average was 0.85 kg in Colombo Municipal Council, 0.75 kg in other Municipal Councils, 0.60 kg in Urban Councils and 0.40 kg in Pradeshiya Sabhas.
- Local Authorities are entirely responsible for the management of solid waste as per the following legal enactments:
  - Municipal Council Ordinance
  - Urban Council Ordinance
  - Pradeshiya Sabha Act

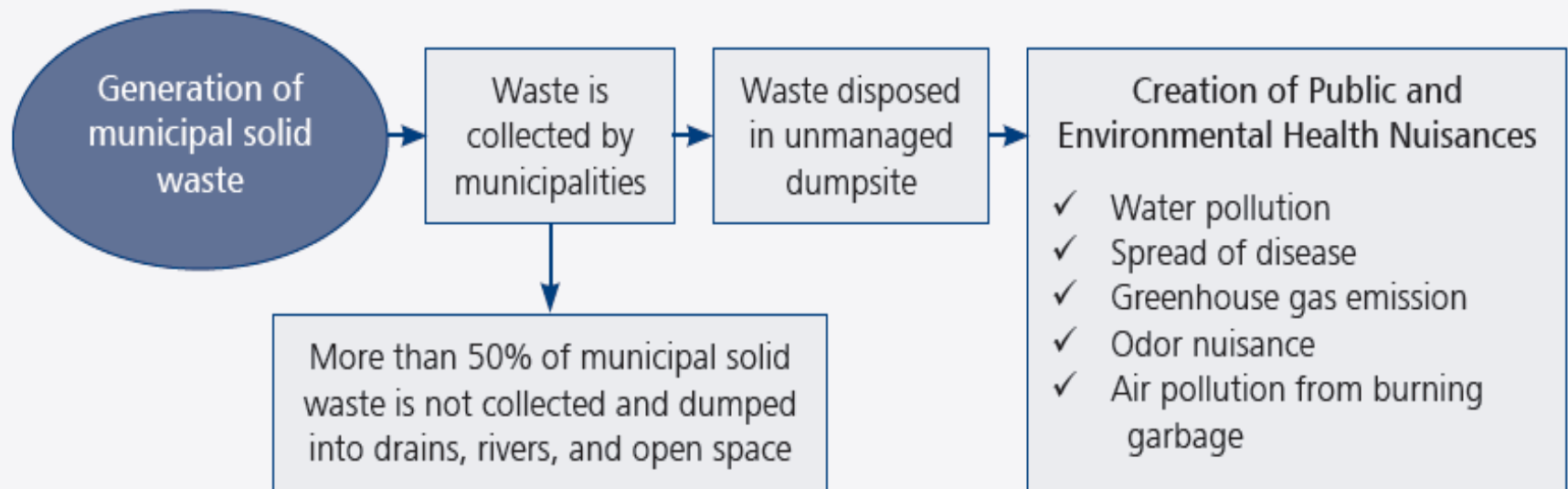


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# South Asian Scenario of Solid Waste Management

Figure 2 Typical Scenario of Solid Waste Management in South Asia



Source: Authors.





# Success Story from Sri Lanka



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‘Pilisaru’ National Solid Waste Management Project





## ‘පිළිසරු’ - ජාතික සහ අපද්‍රව්‍ය කළමනාකරණ ව්‍යාපෘතිය ‘Pilisaruru’ National Solid Waste Management Project

- ❖ In 2007, the Ministry of Environment formulated the National Policy on Solid Waste Management
- ❖ In 2008, the **Pilisaru National Solid Waste Management Project** was established within the Central Environmental Authority (CEA) to implement the policy at ground level.
- ❖ It's funded by the Treasury of the Government of Sri Lanka



## **‘පිළිසරු’ - ජාතික සහ අපද්‍රව්‍ය කළමනාකරණ ව්‍යාපෘතිය** **‘Pilisaru’ National Solid Waste Management Project**

### **Main aim of the Pilisaru Project**

❖ is to solve solid waste problem in Sri Lanka

❖ **Under this Project waste management is managed by**

Adhering to reduction of waste generation by reuse, recycling and resource recovery to the maximum extent possible,

followed by appropriate treatment and finally the disposal of residual waste in an environmentally sound manner.

# Major Programmes

## Construction of small/medium and Large scale composting plants

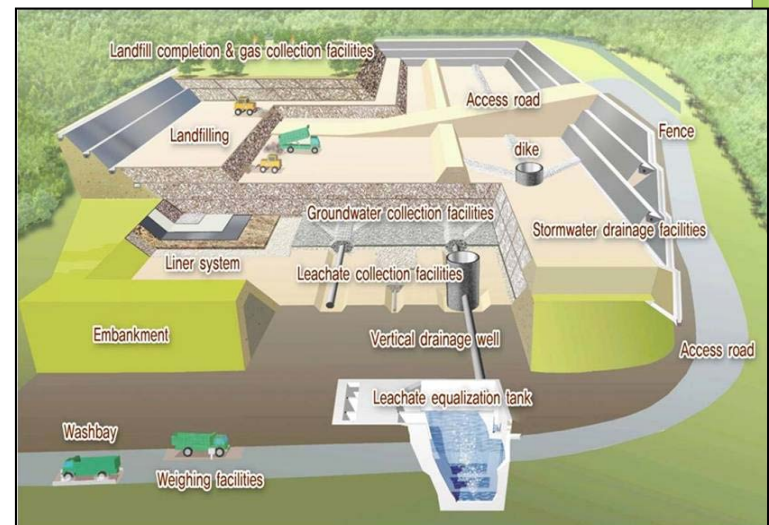
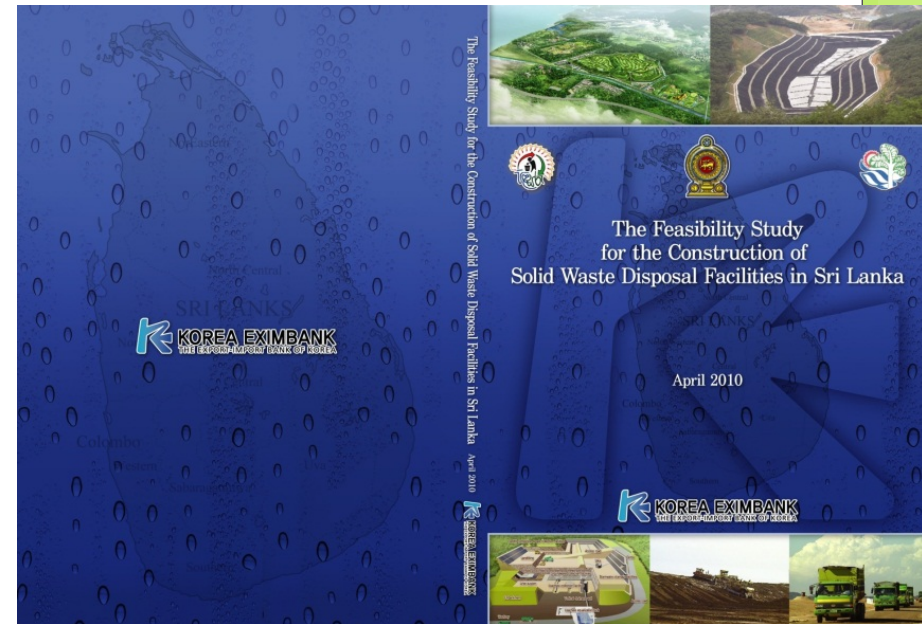
- 5 Large scale compost plants at
  - Pothuwilkubura, Kolonnawa
  - Pohorawatta, Kalutara
  - Keerikkulama at Nuwaragampalatha, Anuradhapura
  - Madirigiriya, Polonnaruwa
  - Monroviawatta, Hikkaduwa
- Small/medium scale composting units for 93 Local Authorities





# Construction of Sanitary Landfills

- Construction of Sanitary Landfill at Maligawatte Dompe with Technical and Financial Assistance of the KOICA Republic of Korea
- Construction of Sanitary landfills under the EDCF at Hikkaduwa, Panadura, Anuradhapura Kandy



# Provided Household Compost Bins & Waste separation bins to Local Authorities, Schools, Religious Places, and Institutions

- 30,000 plastic compost bins were delivered according to their request to dispose the organic part of the municipal solid waste generated in their premises.
- 450 sets of waste separation bins (of three colors to dispose paper, glass and polythene/plastics separately) are provided free of charge.





# Waste Collection and Transport Vehicles, Machinery and Equipment

- Distributed to 19 Local Authorities to facilitate handling and treatment of waste conveniently



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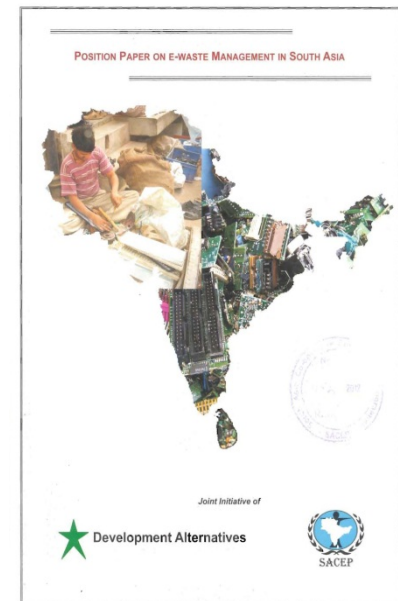
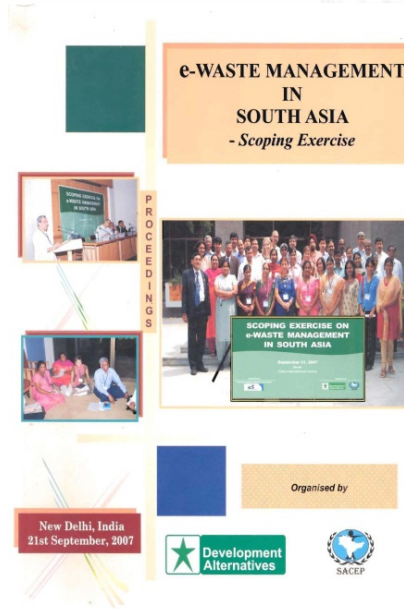
# Other Activities

- Training and Awareness programs for the various stakeholders
- Construction of Bio gas plants for Hospitals and other Institutions.
- Waste management promotional activities (Pilisaru Banking, Parisara Gammuna, Pilisaru Pivithuru Pasal program )
- Strengthening the existing legal framework for Solid Waste Management)



# Activities of SACEP related to waste management

- A scoping Exercise on E-Waste Management in South Asia “ was conducted in New Delhi, India in 2007 in collaboration with the Development Alternative (DA)
- **The main objective was to** establish contacts with stakeholders, including governments and private sector in the region and to finalize the position paper which included the on going practices and status of the initiatives at various levels (regional, national and local) under taken by the different agencies and to develop project proposals in consultation with stakeholders for the consideration of funding agencies,







**SAF Games 2006**  
South Asian Federation Games

**Colombo - Sri Lanka**



- Organized the “South Asian Games Waste Management Programme” at the South Asian Games held in Colombo, Sri Lanka in 2006.
- disseminated the message of waste management in the region through widely publicized event
- SACEP supported UNCRD in organizing the first National 3R Workshop for South Asia held in Dhaka, Bangladesh 2007.
- Prepared the “Frame work for Marine Litter Management in South Asia “





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சுற்றுடல் அமைச்சு  
Ministry of Environment

## International coastal Cleanup Day

Since 2008 SACEP has been organizing many activities to commemorate International Coastal cleanup Day. (in 2008 and 2009, SACEP and Indian Coast Guards jointly organized events in Chennai, India.

In 2010 in collaboration with US Embassy in Colombo and Ministry of Environment of Sri Lanka, SACEP organized the beach clean-up programme in Negombo, Sri Lanka and more than 500 school children and people from hotel Industry participated.



# International Coastal Clean up day -2010





# Proposed Activities

- SACEP is in the process of Developing collaborative programmes with in the region to control imports and exports of e-waste and also for the information and technology transfer
- Regional training programmes for policy makers and personnel involved with the subject of waste management in 2013
- A project proposal on waste Management which was approved at the 11th GC has been forwarded to UNEP for funding.
- We are also in the process of establishing the “ Basel Convention Regional Centre for South Asia” at the SACEP Secretariat.
- Discussions are going on to facilitate Implementing of a small scale composting plant in Sri Lanka with the assistance UNCRD .





Thank You